at least one first data unit,

at least one second data unit having the at least one first data unit, and

at least one third data unit having the at least one second data unit, the at least one

third data unit storing header information relating to the at least one first data unit in the at

least one third data unit,

said information medium comprising:

a management area configured to store packet length information of the data packets.

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the

following discussion, is respectfully requested.

Claims 14-19 are presently active; Claims 14 and 17 having been amended, and Claim

19 having been added by way of the present amendment. Support for amended Claims 14

and 17 and for new Claim 19 can be found at least from page 56, line 27, to page 63, line 24,

and in Figures 24 and 25 of Applicants' specification. No new matter has been added by the

present amendment.

In the Office Action, Claims 14-18 were rejected under 35 U.S.C. 102(b) as being

anticipated by Kawamura et al. (U.S. Patent No. 5,621,840; hereinafter "Kawamura").

Claims 14-18 were rejected under 35 U.S.C. 102(e) as being anticipated by Kikuchi et al.

(U.S. Patent No. 6,134,383; hereinafter "Kikuchi").

Brief Discussion of Claimed Invention

Amended Claim 14 recites, among other features, a data structure stored on said information medium including: a stream object,[1] formed of the bitstream information, including at least one first data unit,[2] at least one second data unit[3] having the at least one first data unit, and at least one third data unit[4] having the at least one second data unit, the at least one third data unit storing header information[5] relating to the at least one first data unit in the at least one third data unit.

These features are also recited in Claim 1 of Ando et al. (U.S. Patent No. 6,373,803; hereinafter "Ando"); however, amended Claim 14 is patentably distinguishable from Claim 1 of Ando, as amended Claim 14 recites a formatter configured to format an input signal into a bitstream of data packets for an MPEG transport stream, said data packets corresponding to the at least one first data unit; and a recorder section configured to record the bitstream in the data area of said information medium.

Amended Claim 17, which also recites the features discussed above, is patentably distinguishable from Claim 1 of Ando, as amended Claim 17 recites a reproducer section configured to reproduce the bitstream from the data area of said information medium, and a transfer section configured to transfer the data packets in the reproduced bitstream from the reproducer section to a decoder in which a content of the data packets is decoded.

New Claim 19, which also recites the features discussed above, is patentably distinguishable from Claim 1 of Ando, as new Claim 19 recites a management area configured to store packet length information of the data packets.

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[1] e.g., Specification at (STREAM OBJECT #A), Figure 24(f).
[2] e.g., Specification at (TRANSPORT PACKET a), Figure 24(b).
[3] e.g., Specification at (SECTOR NO. 0), Figure 24(d).
[4] e.g., Specification at (STREAM BLOCK #1), Figure 24(e).
[5] e.g., Specification at (STREAM BLOCK HEADER 11), Figure 24(c) and 25.

Discussion of 35 U.S.C. 102(b) Rejection

Kawamura fails to disclose or suggest amended Claim 14. Kawamura discloses a data encoding apparatus[6] for inserting entry packets[7] into a bit stream.[8] However, Kawamura is completely silent on a data structure as recited in amended Claim 14.

In contrast to Applicants' claimed invention, Kawamura does not disclose or suggest a data structure stored on said information medium including: a stream object, formed of the bitstream information, including at least one first data unit, at least one second data unit having the at least one first data unit, and at least one third data unit having the at least one second data unit, the at least one third data unit storing header information relating to the at least one first data unit in the at least one third data unit. As such, Kawamura fails to anticipate amended Claim 14.

Moreover, it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kawamura to include features of amended Claim 14. For example, Kawamura discloses a bit stream structure where a pack includes a header related to the pack, and where a packet includes a header related to the packet.[9] In contrast, amended Claim 14 recites header information stored in a third data unit and relating to a first data unit, where the third data unit includes a second data unit having the first data unit. As a consequence of this data structure, header information is positioned in a different data hierarchy than the data unit it relates to, and the claimed data structure allows access to information[10] regarding transport packets[11] without requiring access to packet-level data.[12] In this way, a data structure facilitating efficient searching of recorded stream data is provided.

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[6] Kawamura at Figures 7 and 8.
[7] Kawamura at Figure 10.
[8] Kawamura from col. 5, line 52, to col. 6, line 12; and at Figure 9.
[9] Kawamura at col. 1, lines 53-67, and Figure 3.
[10] e.g., Specification at (PSTREAM BLOCK HEADER 11), Figures 24(c) and 25.
[11] e.g., Specification at (TRANSPORT PACKET a), Figure 24(b).
[12] e.g., Specification at Figure 24(b).

Therefore, at least for the reason discussed above, Kawamura appears to teach away from the concept encompassed by amended Claim 14.

Accordingly, amended Claim 14 is patentable over Kawamura, and Applicants' respectfully request reconsideration and withdrawal of the rejection of Claim 14 under 35 U.S.C. 102(b). Claims 15 and 16 depend from amended Claim 14 and are patentable over Kawamura at least for the reasons discussed above. Claims 17-19 recite subject matter substantially similar to amended Claim 14 and are also patentable over Kawamura at least for the reasons discussed above.

Discussion of 35 U.S.C. 102(e) Rejection

Kikuchi does not disclose or suggest amended Claim 14. Kikuchi discloses an encoder system[13] that creates a video file of a title set in which video data is encoded.[14] Kikuchi also discloses a structure of a video pack, where a pack includes a pack header 120, a packet header 121a, and video data 122.[15]

However, Kikuchi is completely silent on a data structure as recited in amended Claim 14. In contrast to Applicants' claimed invention, Kikuchi does not disclose or suggest a data structure stored on said information medium including: a stream object, formed of the bitstream information, including at least one first data unit, at least one second data unit having the at least one first data unit, and at least one third data unit having the at least one second data unit, the at least one third data unit storing header information relating to the at least one first data unit in the at least one third data unit. As such, Kikuchi fails to anticipate amended Claim 14.

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[13] Kikuchi at Figure 50.
[14] Kikuchi from col. 30, line 64, to col. 31, line 24.
[15] Kikuchi at Figure 36A.

Moreover, it would not have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kikuchi to include features of amended Claim 14. For example, Kikuchi discloses a video pack structure, where a video packet includes a header related to the video packet itself.[16] In contrast, amended Claim 14 recites header information stored in a third data unit and relating to a first data unit, where the third data unit includes a second data unit having the first data unit. As a consequence of this data structure, header information is positioned in a different data hierarchy than the data unit it relates to, and the claimed data structure allows access to information[17] regarding transport packets[18] without requiring access to packet-level data.[19] In this way, a data structure facilitating efficient searching of recorded stream data is provided. Therefore, at least for the reason discussed above, Kikuchi appears to teach away from the concept encompassed by amended Claim 14.

Accordingly, amended Claim 14 is patentable over Kikuchi, and Applicants' respectfully request reconsideration and withdrawal of the rejection of Claim 14 under 35 U.S.C. 102(e). Claims 15 and 16 depend from amended Claim 14 and are patentable over Kikuchi at least for the reasons discussed above. Claims 17-19 recite subject matter substantially similar to amended Claim 14 and are also patentable over Kikuchi at least for the reasons discussed above.

Conclusion

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

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[16] Kikuchi at (VIDEO PACKET), Figure 36A.
[17] e.g., Specification at (PSTREAM BLOCK HEADER 11), Figures 24(c) and 25.
[18] e.g., Specification at (TRANSPORT PACKET a), Figure 24(b).
[19] e.g., Specification at Figure 24(b).

Finally, the attention of the Patent Office is directed to the change of address of Applicants' representative, effective January 6, 2003:

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Please direct all future communications to this new address.

Respectfully submitted,

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IN THE CLAIMS

Please amend the Claims 14 and 17 as follows:

14. (Amended) A bitstream data processing apparatus using a recordable information medium having a data area and a management area, <u>a data structure stored on said information medium including,</u>

<u>a stream object, formed of the bitstream information, including at least one first data unit, at least one second data unit having the at least one first data unit, and at least one third data unit having the at least one second data unit, the at least one third data unit storing header information relating to the at least one first data unit in the at least one third data unit,</u>

said apparatus comprising:

[an encoder configured to encode one or more input signals to provide corresponding encoded data;]

a formatter configured to format [the encoded data] <u>an input signal</u> into a bitstream of data packets <u>for an MPEG transport stream, said data packets corresponding to the at least one first data unit</u>; and

a recorder section configured to record the bitstream in the data area of said information medium.

17. (Amended) A bitstream data processing apparatus [coupled with a decoder box and] using a recordable information medium having a data area and a management area, a data structure stored on said information medium including,

[wherein a bitstream including information of one or more encoded signals is recorded in a form of data packets in the data area of said information medium,]

a stream object, formed of the bitstream information, including at least one first data unit, at least one second data unit having the at least one first data unit, and at least one third data unit having the at least one second data unit, the at least one third data unit storing header information relating to the at least one first data unit in the at least one third data unit,

said apparatus comprising:

a reproducer section configured to reproduce the bitstream from the data area of said information medium; and

a transfer section configured to transfer the data packets in the reproduced bitstream from the reproducer section to [the] a decoder [box] in which a content of the data packets [including the information of one or more encoded signals are] is decoded.